

Notice of Allowability

Application No.

09/942,390

Examiner

Justin I. King

Applicant(s)

RICHARD SOLOMON ET AL.

Art Unit

2111

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 3/7/05.
2. ☒ The allowed claim(s) is/are 13-19,21-23 and 25.
3. ☒ The drawings filed on 29 August 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.


THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 3/14/05.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Applicant's Representative Jon Lindsay on 3/14/05.

2. The application has been amended as follows:

Claims 1-5 and 7-12 are cancelled without prejudice or disclaimer.

Claim 13 is amended as follows:

13. (Amended) An interface controller for communicating commands and data to at least one target device attached to the interface controller; the interface controller comprising:

a command queue having a command buffer in which the commands are recorded;

a data mover for transferring commands to a target device and receiving responses from the target device in response to commands, and

a queue processor connected to the command queue and the data mover, the queue processor operatively applying selected commands from the command buffer to the data mover to be transferred to the target device for completion, the queue processor including programmed logic functionality which:

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applies a first read command from the command buffer to the data mover for transfer to a target device for completion;

recognizes a response from the target device indicating a delay in completion of the first read command;

determines that the command in the command buffer following the first read command is a second read command;

sets a loop start pointer to identify the first read command;

sets a loop end pointer to identify the second read command;

applies the second read command from the command buffer to the data mover for transfer to a target device for completion;

recognizes a response from the target device indicating a delay in completion of the second read command,

determines that the command in the command buffer following the second read command is a third read command,

advances the loop end pointer to identify the third read command;

applies the third read command from the command buffer to the data mover for transfer to a target device for completion; and

~~advances the loop start pointer to the next subsequent command in the command buffer after the command identified by the loop start pointer has been completed.~~

advances the loop end pointer to the next subsequent read command in the command buffer upon recognizing the first delay in completing the preceding read command.

Allowable Subject Matter

3. Claims 13-19, 21-23, and 25 are allowed.

4. The following is an examiner's statement of reasons for allowance:

Referring to claim 13: The prior arts on the record do not disclose or teach the combined claimed limitations. Particularly, the prior arts on the record do not disclose or teach *advancing the loop end pointer* to the next subsequent read command in the command buffer upon *recognizing the first delay in completing the preceding read command*.

Referring to claim 14-17, 19, 21-23, and 25: Claims are allowable because they incorporate the parent claim's allowable subject matter.

Referring to claim 18: In addition of incorporating the parent claim's allowable subject matter, the prior arts on record do not disclose or teach that *while remaining only one delayed read command, applies another command being a command not included in the loop before the loop was abolished*.

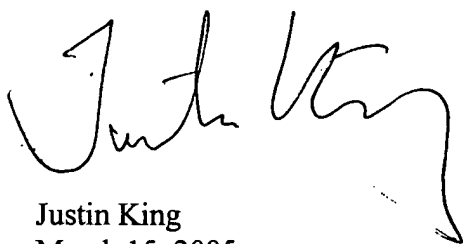
5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

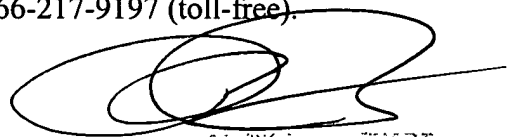
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin I. King whose telephone number is 571-272-3628. The examiner can normally be reached on Monday through Friday, 9:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on 571-272-3632. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Justin King
March 15, 2005



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SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100